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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

CARLEY, JEFFREY T.

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3729

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/596,273	Applicant(s) ZACH ET AL.	
	Examiner JEFFREY CARLEY	Art Unit 3729	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Objections

Claim 1 is objected to because of the following informalities: on line 5, after “carrier”, a “;” is missing. On line 8, after deleted “(6, 7)” there is an extra “and”. Appropriate correction is requested.

Claim 7 is objected to because of the following informalities: on line 2, after “one”, please insert “of”. Appropriate correction is requested.

Claim 11 is objected to because of the following informalities: on line 2, after “each”, please insert “of”. Appropriate correction is requested.

Claim 13 is objected to because of the following informalities: on line 2, after previously deleted “(4, 5)”, please delete “has” and replace with “have”. Appropriate correction is requested.

Claim 26 is objected to because of the following informalities: on line 2, after “more”, please insert “of”. Appropriate correction is requested.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Regarding claims 6 and 17, the modifier “-like” renders the claim(s) indefinite because the claim(s) include(s) elements not actually disclosed (those encompassed by

Art Unit: 3729

"plate- or frame-like"), thereby rendering the scope of the claim(s) unascertainable. See MPEP § 2173.05(d).

Claim 20 recites the limitation "said lifting devices" in line 3. There is insufficient antecedent basis for this limitation in the claim. It is the interpretation of the examiner that the applicant may have intended to claim "said lifting unit" as is based upon the language of claim 19, from which claim 20 is dependent.

Claims 23 and 25 recite the limitation "said components" in line 1. There is insufficient antecedent basis for this limitation in the claim. As claims 23 and 25 are both independent claims, the "components" have not been introduced within the instant dependency chain.

Claim Rejections - 35 USC § 102

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-13, 17-21, 23, 25 and 26 are rejected under 35 U.S.C. 102(b) as being anticipated by USP 4773156, drawn to Kurita, hereinafter, '156.

Regarding claim 1, '156 discloses an automatic driver device for joining components (5, 3a), in a driving station (2), the driver device comprising: a basic carrier (10); a plurality of automatic driver tools (1), mounted on said basic carrier an adjusting means (11, 13), said automatic driver tools being movable along a plurality of axes (X and Y) by means of said adjusting means, said plurality of driver tools being integrated in at least one screwdriver group (12) and being mounted together movably at the basic carrier by means of said adjusting means (figs. 4 and 5; col. 3, lines 1-36).

Regarding claim 2, '156 discloses the driver device in accordance with claim 1, wherein said driver tools are additionally mounted movably in relation to one another by means of said adjusting means within said screwdriver group (col. 3, lines 22-29).

Regarding claim 3, '156 discloses the driver device in accordance with claim 1, wherein said adjusting means comprises a multistep carriage unit (12, 13, 14, 15) that can be telescoped or cascaded (col. 3, lines 22-29).

Regarding claim 4, '156 discloses the driver device in accordance with claim 3, wherein the carriage unit has a plurality of said carriage steps (13, 14) that are movable relative to one another along at least one axis (col. 3, lines 22-29).

Regarding claim 5, '156 discloses the driver device in accordance with claim 4, wherein the carriage steps are mounted next to each other (fig 5; mounted on 12).

Regarding claim 6, (as best understood) '156 discloses the driver device in accordance with claim 4, wherein at least one said carriage step has a plate or frame subcarrier (12) with a plurality of said driver tools integrated in a screwdriver group (fig. 5).

Regarding claim 7, '156 discloses the driver device in accordance with claim 1, wherein at least one said driver tools from the screwdriver group is arranged on at least one next carriage stage and/or on a transverse adjusting portion (15) of said adjusting means (col. 3, lines 25-31).

Regarding claim 8, '156 discloses the driver device in accordance with claim 4, wherein the carriage steps have controllable carriage drives (13) of their own (col. 3, lines 22-29).

Regarding claim 9, '156 discloses the driver device in accordance with claim 1, wherein said adjusting means has a smaller width and length than the basic carrier (figs. 4, 5).

Regarding claim 10, '156 discloses the driver device in accordance with claim 3, wherein a plurality of said carriage units is arranged next to each other on the basic carrier (fig. 5).

Regarding claim 11, '156 discloses the driver device in accordance with claim 3, wherein said adjusting means has, for each said driver tools, a linear transverse adjusting means (14) with a controllable adjusting drive (13).

Regarding claim 12, '156 discloses the driver device in accordance with claim 11, wherein the transverse adjusting means is arranged between the driver tools and the multistep carriage unit or a one-step longitudinal adjusting means (fig. 5; 14 is between 1 and 12).

Regarding claim 13, '156 discloses the driver device in accordance with claim 1, wherein the driver tools have a bracket (18) and a driving unit (16) movable thereon along one or more axes.

Regarding claim 17, (as best understood) '156 discloses the driver device in accordance with claim 1, wherein the basic carrier has a plate or frame design (figs. 4, 5).

Regarding claim 18, '156 discloses the driver device in accordance with claim 1, wherein the basic carrier has a chassis (10) and a rail guide (11), for withdrawing and extending from the driving station (figs. 4, 5).

Regarding claim 19, '156 discloses the driver device in accordance with claim 1, wherein the basic carrier has a centering and lifting unit (7) (col. 3, lines 32-45).

Regarding claim 20, (as best understood) '156 discloses the driver device in accordance with claim 19, wherein the centering and lifting unit comprises a plurality of introducing units (7) with said lifting units (figs. 5-7; col. 3, lines 32-45).

Regarding claim 21, '156 discloses the driver device in accordance with claim 1, further comprising: a control (of robot, 2) (col. 4, lines 38-40), connected to said adjusting means and spindle drives (16) of said driving unit.

Regarding claim 23, (as best understood) '156 discloses a driving station for joining components (5, 3a) of vehicle bodies, the station comprising: an automatic driver device (2) comprising a basic carrier (10), a plurality of automatic driver tools (1) mounted on said basic carrier and an adjusting means (11, 13), said automatic driver tools being movable along a plurality of axes (X, Y, etc.) by means of said adjusting means, said plurality of driver tools being integrated in at least one screwdriver group (12) and being mounted together movably at said basic carrier by means of said adjusting means (figs. 4 and 5; col. 3, lines 1-36).

Regarding claim 25, (as best understood) '156 discloses the process for joining components (5, 3a), of vehicle bodies, in a driving station with an automatic driver (2), the process comprising providing a basic carrier (10) with a plurality of automatic driver tools (1) mounted movably along multiple axes thereon by means of an adjusting means (11, 13); and integrating said plurality of driver tools in a screwdriver group (12) and are adjusted together by means of said adjusting means (figs. 4 and 5; col. 3, lines 1-36).

Regarding claim 26, (as best understood) '156 discloses the process in accordance with claim 25, wherein one or more of said driver tools are additionally adjusted relative to one another by means of said adjusting means within the screwdriver group (col. 3, lines 22-29).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 22 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over '156 in view of USP 4799581, to Fujii, hereinafter '581.

Regarding claim 22, '156 discloses all of the elements of the current invention as described above. '156, however, does not teach that the robotic control is a numeric multi-axis control.

'581 teaches that it is well known to use numeric multi-axis control for robotic applications (col. 5, lines 26-32).

It would have been obvious to one of ordinary skill in the art to have modified the current invention of '156 to incorporate the numeric multi-axis control of '581. It is old and well known that the control of robotic machinery is accomplished by numeric multi-axis control. Robots move and perform other work based on numerical coordinate systems which represent 3-dimensional positions within a multi-axis, multi-plane region.

Regarding claim 24, the modified '156 discloses the driving station in accordance with claim 22, wherein a spindle carrier (17) is arranged between the components and the driver device (figs. 6, 7).

Allowable Subject Matter

Claims 14-16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Smith (USP 5125298), Lutz et al. (USPG-Pubs 2005/0188527 and 200/50028648), and Amesbichler et al. (USP 5778517) all teach multi-head screwdriver devices which are pertinent to the instant application.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JEFFREY CARLEY whose telephone number is (571)270-5609. The examiner can normally be reached on Monday through Thursday 8:00am-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Derris Banks can be reached on (571)272-4419. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3729

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/JTC, AU 3729/

/Derris H Banks/

Supervisory Patent Examiner, Art Unit 3729